

USS

STEEL SHEETS *and* ROOFING TERNES

FOR ROOFING ★ SIDING ★ FLASHING
DUCT WORK ★ FORMED PRODUCTS



UNITED STATES STEEL



Why U·S·S Symbolizes Leadership in High Grade Sheet Products

To the property owner, steel presents an ideal roofing and siding material. In the long run he will find steel is easy on his pocketbook and that steel combines the advantage of *reasonable first cost with long life, low maintenance cost and maximum protection*. To the architect and builder, steel roofing and siding offer the additional benefit of *ease of installation*.

Add to these advantages the *leadership in steel making* symbolized by the letters U·S·S and you have six tangible reasons for specifying U·S·S Sheet Products. Monticello, the home built by Thomas Jefferson in Virginia, is shown on the front cover. This beautiful building is roofed with U·S·S Copper Steel Ternes.

Leadership, as interpreted by the United States Steel Corporation Subsidiaries, is a word signifying four outstanding services to users of steel:

- (1) Modern mills with the most advanced equipment for making steel.
- (2) Unexcelled research facilities for developing new steel products.
- (3) Efficient distribution of U·S·S Sheet Products by means of jobbers and warehouses throughout the country. Our delivery is fast because our mills are close to you in miles and hours.
- (4) A consulting service offered to architects and engineers at no obligation. Write to our nearest district sales office. (See list on page 12.)

U·S·S Sheet Products carry the assurance of uniformity and full standard weight. They are products of known value, backed by the universally recognized symbol U·S·S.

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The Complete Line of U·S·S Sheet and Terne Products

There is more to a steel sheet than how it works on a particular job. Quality is determined in service, and the dependability of U·S·S Steel Sheets under all conditions is the reason why architects and fabricators have preferred to specify them for many years. U·S·S Steel Sheets are available in four principal types, namely: U·S·S Black Sheets, U·S·S Galvanized Sheets, U·S·S Roofing Ternes and U·S·S Stainless Steel Sheets.

You can obtain U·S·S Black Sheets in varying degrees of finish, ductility, and other needed qualities. The gauges supplied for ordinary architectural applications include United States Standard Gauge numbers 10-30, that is, thicknesses from 0.1345 inches to 0.0120 inches (see table on page 8). For special purposes, consult our nearest district sales office or your supplier of sheet metals.

U·S·S Galvanized Sheets not only have a scientifically prepared steel base but special attention has been given to the zinc coating to insure a firm and lasting bond between the zinc and the base sheet. These galvanized sheets are furnished in various weights of coating, with as wide a range of selection as you find with U·S·S Black Sheets. For products involving unusually severe forming, specify U·S·S Galvannealed Sheets.

U·S·S Black and Galvanized Sheets are both available with the extra protection of copper alloyed with the high-grade steel base. Tests made under actual weather conditions by many metallurgical authorities in a wide variety of locations have proved that U·S·S Copper Steel Sheets show greater resistance to rust and corrosion than non-copper metals of substantially the same basic composition.

U·S·S Roofing Ternes are made exclusively from U·S·S Copper Steel Sheets, surface coated with a mixture of lead and tin. Rigid service tests on fine homes and public buildings have proved beyond doubt that a terne roof, properly applied, will last 100 years. U·S·S Copper Steel Long Ternes and U·S·S Copper Steel Short Ternes are available in numerous grades and weights of coating. The ternes are moderate in price, last indefinitely, cost the minimum for maintenance, for repairs, and form a lightweight, attractive permanent roof.

Look at the picture of Monticello on the cover, reroofed with U·S·S Copper Steel Ternes in 1926.

Consult a sheet metal worker or a sheet steel distributor in your neighborhood. He will tell you that ternes are *easy to apply* as roofing or flashing, *durable* and *economical*.

For information on U·S·S Stainless Steel Sheets, please refer to the File Index.



What are the Advantages of a Terne Roof?

Among steel roofing materials, two types have particular advantages to architects.

For fine residences and public buildings, we recommend U·S·S Copper Steel Ternes. A roofing terne plate is a steel sheet coated with a mixture of tin and lead. The name *Terne* is probably derived from "ternary," meaning an alloy of three constituents — in this case, steel, tin and lead. Ternes are ductile, durable and economical — three big advantages from an architectural standpoint.

Terne roofs have lasted 80 years in service, as is exemplified by the Moravian Seminary in Bethlehem, Pennsylvania. The White House is

methods illustrated, are waterproof. Ternes are cleated together, soldered and laid as a single piece of metal. In addition, ternes are prepared for painting so that a terne roof can be painted while it is being laid, if speed is essential.

Terne roofs are unaffected by wind and snow, for the metal is impervious to weather, when properly painted.

The safest place during a thunderstorm is in a building roofed with steel, properly grounded. According to experts, a building roofed entirely with steel has never been penetrated by lightning nor the occupants injured.

Adaptability is an important factor in selecting a roofing material. Terne roofs are adaptable to any roofing purpose, from the flat to the perpendicular. Naturally, different types of seams are used for roofs with different pitches.

QUESTIONS AND ANSWERS

Q: What does a 40 pound coating mean?

A: It means that there are 40 pounds of tin and lead used to coat 112 sheets of 20" x 28" steel on both sides of the sheet.

Q: With what coatings are U·S·S Ternes supplied?

A: In coating from 8 pound to 40 pound. For roofing, the 25 pound coating is the lightest which should be used. To insure maximum life, specify U·S·S Copper Steel Ternes with heavier coatings up to 40 pound.

Q: How should U·S·S Ternes be protected against the weather.

A: Ternes should be painted on the under side before laying, and with two coats on the upper side, as soon as the roof is finished.

Q: How shall I order U·S·S Roofing Ternes?

A: Consult with your contractor, your sheet metal distributor or our nearest district sales office. U·S·S Roofing Ternes are available with numerous finishes designated by trade names. For instance, U·S·S MF Ternes and U·S·S "Eagle" Ternes have long been popular.



Easy to solder and form are the U·S·S Roofing Ternes used to make gutters and eave troughs.

U·S·S Copper Steel Ternes are adaptable to any roofing purpose — including valleys, gutters and flashings. When a building is roofed with other materials, it may economically be repaired by laying roofing ternes over it.

roofed with ternes. So is Monticello, Thomas Jefferson's home in Virginia, reroofed in 1926 with U·S·S Copper Steel Ternes. This beautiful building is shown on the cover. Old Swedes' Church in Philadelphia, the Morris Colonial Home, the old Germantown Inn, and many of the historic colonial mansions in the South bear testimony to the long life of terne roofs.

Service. Terne roofs when properly installed and painted last indefinitely with a minimum of attention. They are satisfactory under any climatic conditions.

Fireproof, Waterproof, Lightningproof. Not long ago, The Metal Club of Philadelphia tested terne roofs with a fire test. They found that ternes withstood intense heat where other materials failed. A terne roof is an unbroken sheet of metal with no cracks or openings of any kind to admit fire. Insurance underwriters grant more favorable rates to buildings roofed with ternes because of experiences in notable fires in Chelsea, Massachusetts; Indianapolis, Indiana; Scranton, Pennsylvania, and elsewhere.

Terne roofs, when properly applied, using any of the 5 standard

Appearance is important, and if you look at the photographs of terne roofs shown here, as well as those on historic buildings, you will agree that terne roofs are attractive. The color of a terne roof is a matter of individual taste. The finishing coat of the new terne roof or the repainting of the old can be done in any color or shade preferred. For example: Light green, lead gray, and nut brown are favorite colors. You can have harmony or contrast, as you choose, with the color scheme of the building. (See section on Painting, page 6.)

Economy. A terne roof means long-run economy. Little or no repairing is required. A well-laid roof of U·S·S Copper Steel Ternes has an amazingly low cost per square foot. Consult your local distributor of roofing supplies.

The Five Standard Methods of Applying U.S.S Roofing Ternes

Lap Seam. The lap seam, illustrated in Figure 1, is the simplest type of the seams used in applying U.S.S Roofing Ternes.

Usually, lap seams are made 1 inch wide, with the edges of the sheets soldered for a total distance of $1\frac{1}{2}$ inches. U.S.S Ternes are easily soldered, preferably with a good grade of solder containing about 80% tin.



Figure 1

The Standing Seam. In Figure 2 are illustrated the four steps in laying a standing seam roof. This type of construction gives an attractive and interesting ribbed appearance.

The standing seam is literally a double-lock standing seam. It is developed as outlined in the four steps shown. The edges of the two ternes are bent at right angles, $1\frac{1}{4}$ inches on one edge and $1\frac{1}{2}$ inches on the other edge. Then the two ternes are placed on the roof with the $1\frac{1}{4}$ inch face of one against the $1\frac{1}{2}$ inch face of the other. The pro-

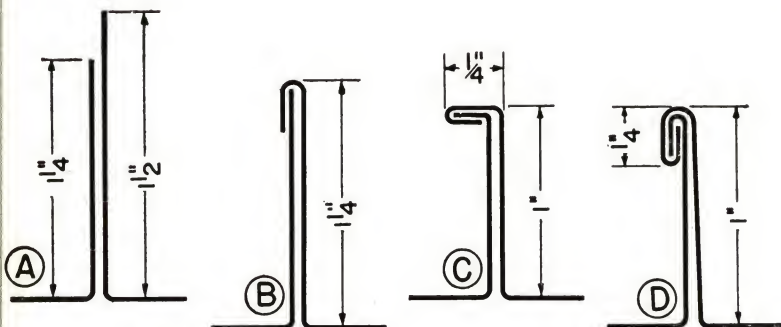


Figure 2

jecting $\frac{1}{4}$ inch of the $1\frac{1}{2}$ inch face is turned 180° over the $1\frac{1}{4}$ inch face, and the lock is completed by a fold of the joined edges.

The standing seam thus finishes 1 inch high. Cleats are used for nailing, as indicated by the seven steps of Figure 3.

Standing seam roofs are particularly adaptable to roofs with a rise of 2 inches per foot and greater. The sheets are laid from ridge to gutter, that is, lengthwise.

U.S.S Long Ternes in sizes from 28" x 96" to 30" x 120" may be used. U.S.S Short Ternes, 20" x 28", are also suitable, and in both cases coatings from 20 to 40 pounds should be specified. See the Questions and Answers on Ternes on Page 3.

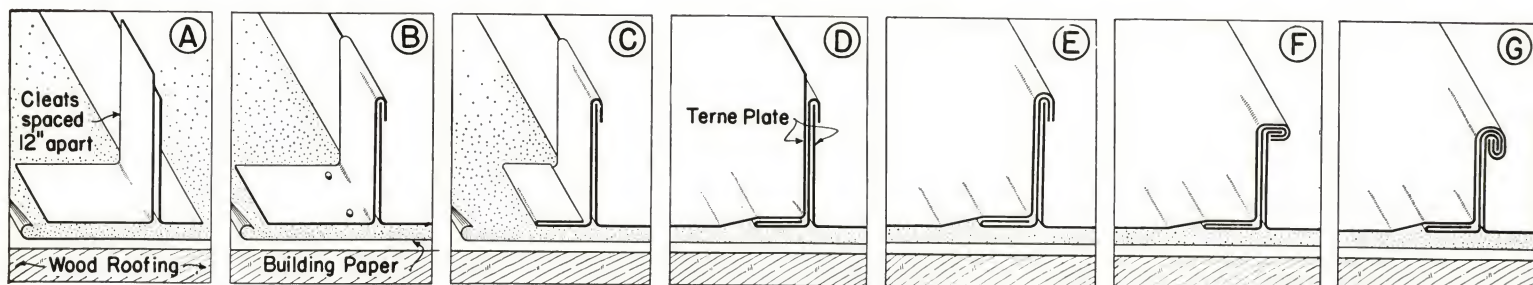


Figure 3

Flat Seam. For a wide variety of terne roofs, including all "flat" roofs — with a rise of $\frac{1}{4}$ inch per foot and greater — the most common construction is the flat seam.

The hook or flat-lock seam, shown in Figure 4, is one example of this type of laying. In developing the seam, the edges of the sheets are tinned and bent at right angles. One face is 1 inch high, the other $\frac{1}{2}$ inch high. The edge of the 1-inch face is turned over the edge of the $\frac{1}{2}$ -inch face, and then both are flattened and soldered, using a good tin solder, as indicated above. U.S.S Ternes are specially prepared for soldering and are ductile so that the bends required in forming seams are easily made.

Figure 5 shows a single flat-lock seam with a cleat. The cleat is placed against the sheet and is nailed to the roof, turning the end back over the nails, so that the metal surface of the roof is unbroken.

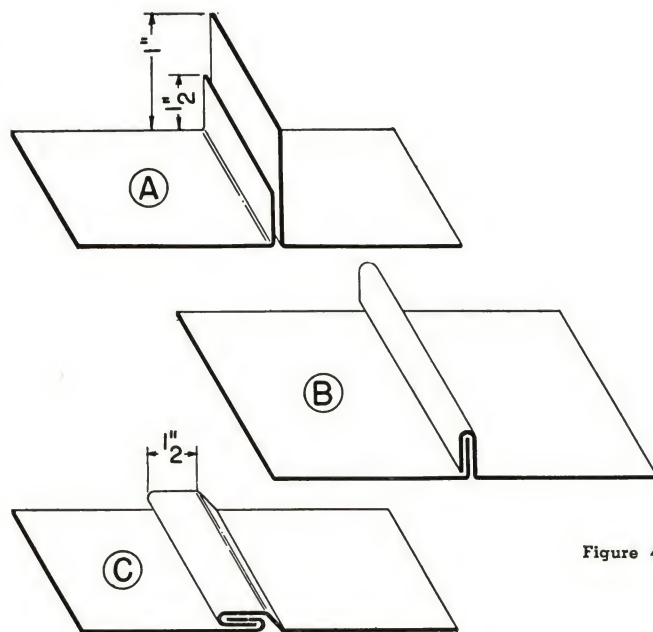


Figure 4

Batten or Ribbed Seams. For a roof where the decking is laid in battens, either in vertical "ribs" or horizontal "steps," construction with U.S.S Roofing Ternes is ideal. This type of construction is relatively simple, yet the number of variations possible makes batten roofs a pleasing possibility for architects who wish originality.

Five types of wood battens are shown in Figure 6 together with the types of terne "caps" used in each case. In Types A and B a separate piece of capping is cut from a U·S·S Long Terne, and the cap flashings are made in about 3-inch widths to the length which you specify.



STEEL HOUSES ARE COMING!

Any modern architect is keenly aware of the interest in steel houses. Soon, builders of good houses in every price class will be using U·S·S Sheet Products for the two principal types of steel houses.

The first type is the Steel Frame House, where steel structural members are substituted for other materials. Steel mesh, bars, wire, tubes and other steel products made by United States Steel Corporation Subsidiaries—as well as U·S·S Steel Sheets—are substituted for other materials.

A second type of construction rapidly becoming popular is the Frameless Steel House. This type embodies prefabricated sections of sheet steel which may be easily and quickly assembled on the house site. For details, write or call our nearest district sales office.

This 4½-inch gap is covered by a terne flashing cut by the sheet metal worker from either a U·S·S Long Terne or a U·S·S Short Terne, 40-pound coating. The flashing may be in the form of an eave capping or of an addition to the gutter. In the latter case, the terne flashing is locked to the bottom sheet of the roofing with a flat-lock seam, and the gutter may be made of the same piece of terne, thus providing a leak-proof roof.

It is important that seams be soldered with a good grade of solder, so that the finished construction will be permanent as well as attractive.

Seven Simple Rules:

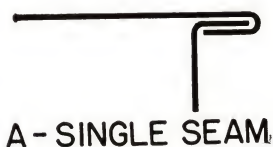
- 1) In general use 40 lb. ternes for roofing, flashing and gutter work.
- 2) Use cleats to facilitate nailing and cover nail holes.
- 3) Use flat head wire nails, spaced 6" maximum for fastening strips and cleats. U·S·S Leak Proof Nails are recommended.
- 4) Make ample size joints and seams.
 - (a) Standing seams at least 1" finished.
 - (b) Flat lock seams at ½" finished.
 - (c) Lap seams to be soldered 1½" finished.
- 5) Prepare the laying surface carefully and see that it is smooth and even.
- 6) Use enough good solder to cover all the surface.
- 7) Use a rosin flux rather than an acid flux.

Combination Seams embody the same principle as the standard types described above. They have no wide use in roofing or flashing work but are used generally ornamentally. Single-seam and double seam corner locks are useful when ternes are laid over angles as sharp as 90 degrees. The double seam is more secure and forms a drip edge. It is preferable. See figure 7.

For example, you may design a roof which has a length from ridge to gutter of 40 feet. Using U·S·S Long Ternes, 30"x120", four ternes will satisfactorily cover the distance from ridge to trough of the roof, except for the 1½ inches of terne required at each flat end seam. The total of three flat-lock seams required to join the four sheets uses up 4½" of the 480" (40 feet.)



Figure 5

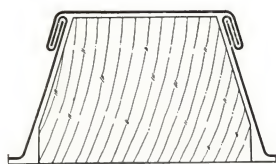


A - SINGLE SEAM

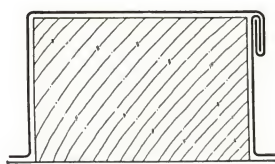
Figure 7



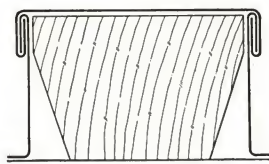
B - DOUBLE SEAM



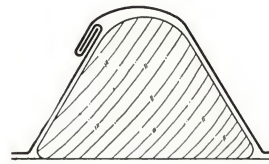
TYPE A



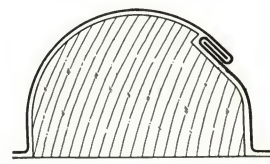
TYPE B



TYPE C



TYPE D

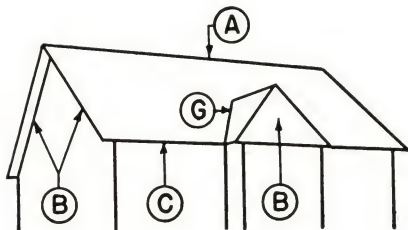


TYPE E

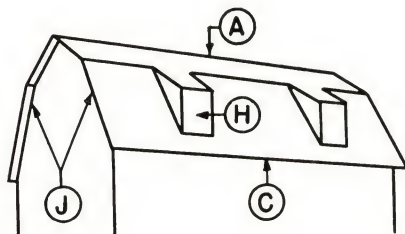
Figure 6

Principal Types of Roofs

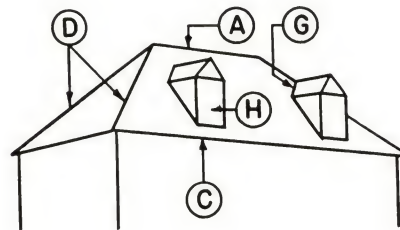
1. The Gable



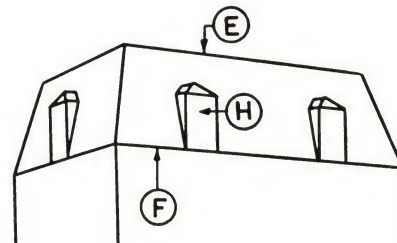
2. The Hip



3. The Gambrel



4. The Mansard



5. The Flat

Roofs may be flat, pitched or made in a combination of slopes. The five classifications above, illustrated in Figure 8, are often called by architects the principal types.

U•S•S Roofing Ternes, because of their many advantages, ductility, permanence, light weight, etc., may be adapted to these five main classifications and to the many variations which a clever architect will conceive.

Directions for Painting U•S•S Ternes. All U•S•S Ternes

are prepared for painting. Before application, the ternes should be painted with one coat on the under side. Two coats of paint should later be applied on the exposed surface immediately after laying. These first coats should be composed of 15 pounds of red lead to 1 gallon of raw linseed oil, with not more than 1/2 pint of oil drier. For the color scheme you select, use subsequent coats of a good paint. A typical paint has the proportions of 15 pounds of white lead to 1 gallon of raw linseed oil with not more than 5% of oil drier and the necessary color to give the desired hue, matching the color scheme you select.

U•S•S Roofing Ternes May Be Applied on Many Surfaces

Wood Sheathing: Well-seasoned wood sheathing forms an excellent laying surface for U•S•S Long and Short Ternes. Sheathing boards should be ship-lap, tongued-and-grooved, or splined. Ship-lap is probably the simplest to lay and offers least trouble from warping and swelling. The ternes, before application, should be painted to the color you specify.

Remember that terne roofs have outlasted houses! Some terne roofs are still good after 100 years.

Concrete as a Base: When steel sheets of any kind are laid on concrete, the latter surface should be made smooth by a wash of neat cement or a heavy coat of acid-free asphalt paint.

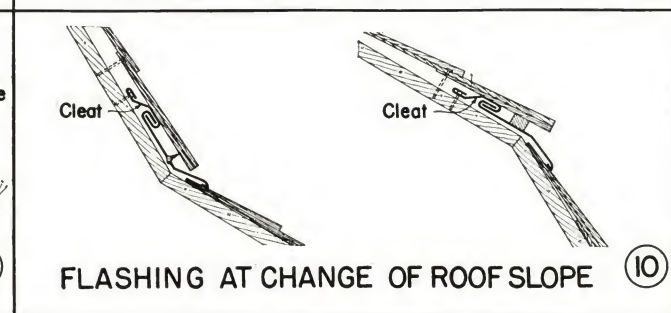
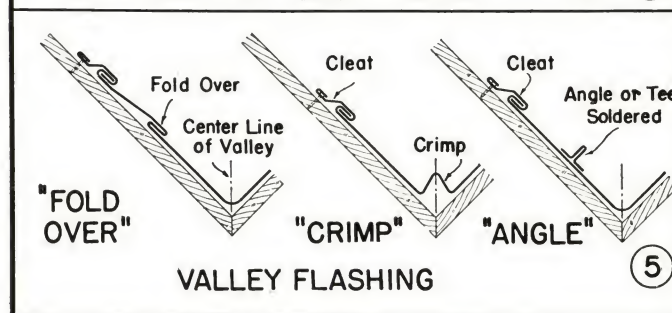
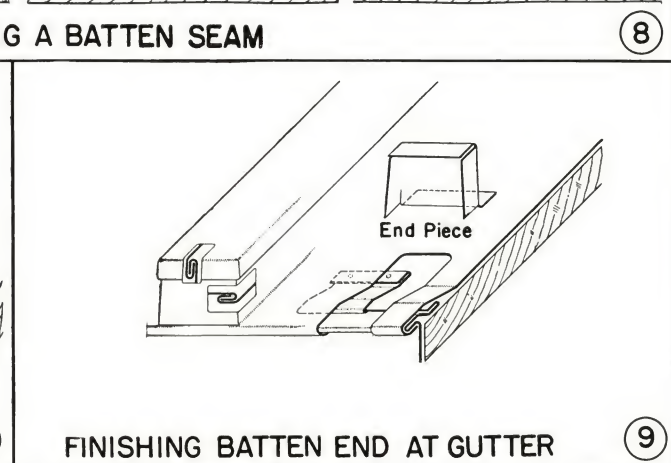
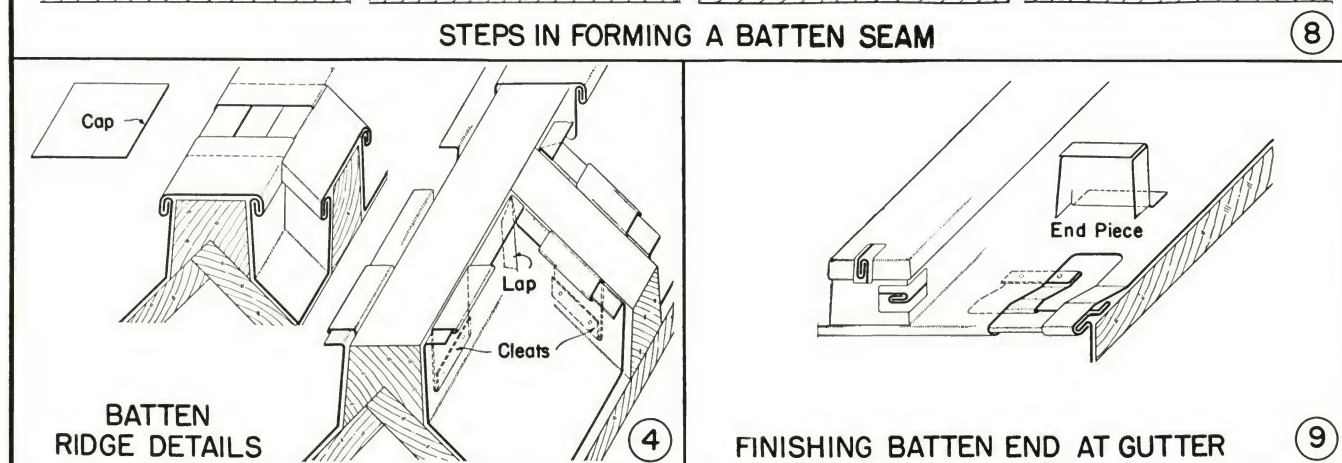
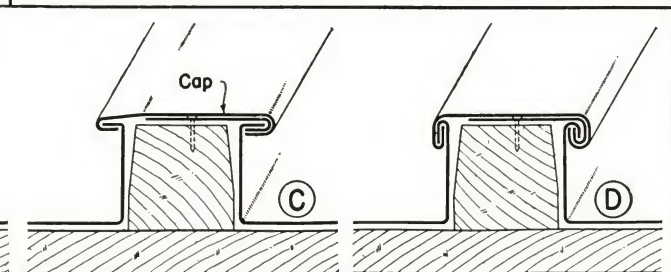
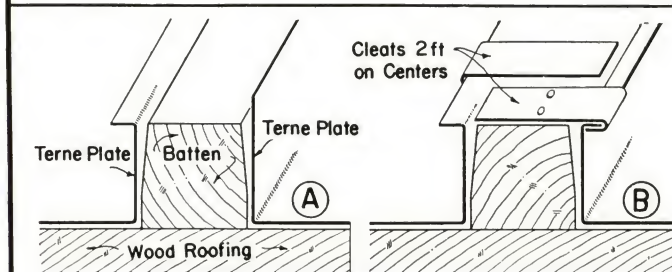
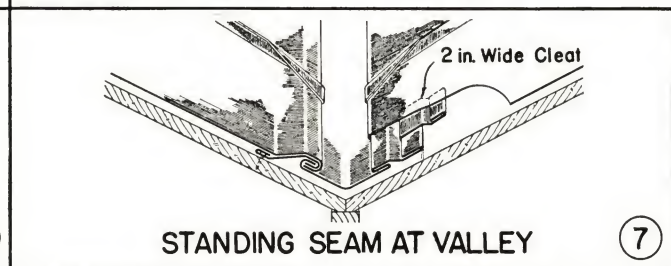
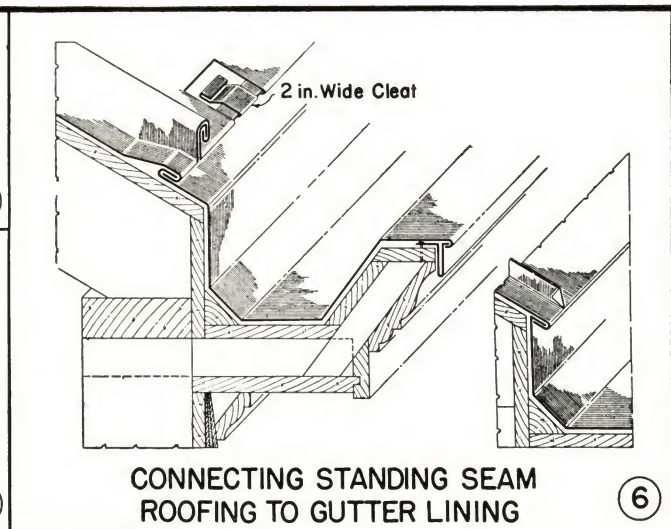
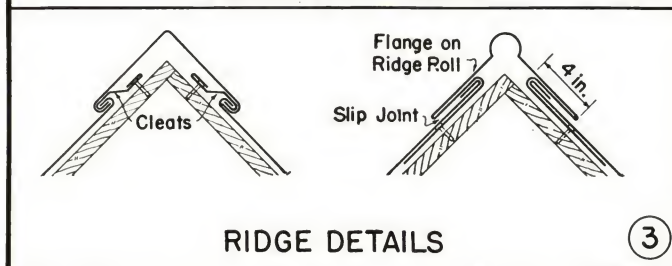
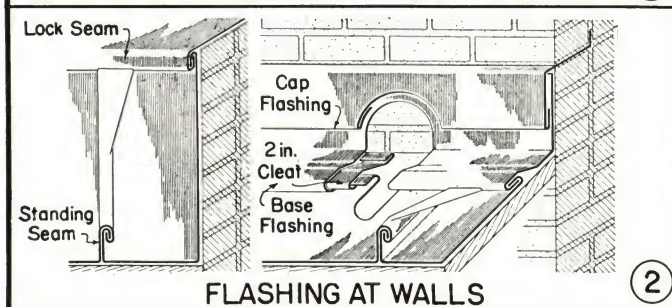
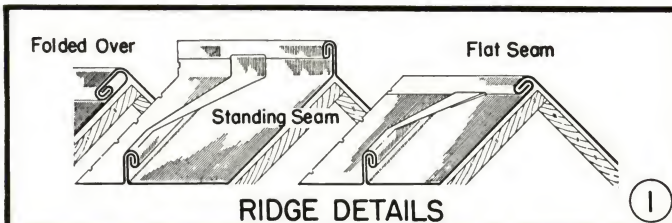
When cinder concrete is used, the protection of a heavy coating of acid-free asphalt paint must be utilized.

Some provision must be made for receiving the nails, whether or not cleats are used. Wood battens or expansion inserts can be set into the concrete. Also, various nailing concretes are manufactured.

Gypsum as a Base: Gypsum also is well adapted for use as a base for terne roofing. What has been said above about concrete applies, except that gypsum can be nailed into directly.

The proper nails must be specified, since a 2-inch nail penetration into gypsum is required. Specify U•S•S American Nails, made by the American Steel and Wire Company, for greatest stiffness and lasting power. U•S•S Leak Proof Nails with a special spring head are also durable; and the head covers the nail hole.

Terra cotta, stone, brick, or stucco may be covered with a flashing of U•S•S Roofing Ternes. Such surfaces should be treated with neat cement or asphalt, as is concrete.



Where to Specify U.S.S Black and Galvanized Sheets

For industrial buildings such as factories, machinery sheds, mine offices and other industrial structures such as conveyors, tipples, etc., U.S.S Black and Galvanized Sheets have twelve definite advantages. Briefly, these are:

Long Life. When properly painted, U.S.S Copper Steel Black and Galvanized Sheets have lasted 30 or 40 years as a roofing material.

Economy. Steel roofing and siding compare most favorably in price with other building materials.

Ease of Application. U.S.S Formed Roofing and Siding products do not require experienced labor to apply them. For most roofing, only one tool is essential—a hammer. This feature adds to the economy of steel building materials.

Strength and Rigidity. Steel construction provides great strength and rigidity without adding undue weight. The use of corrugated patterns, particularly, imparts additional strength without the need of closely laid sheathing. (See the table of approximate safe loads on this page.)

Fire Protection. Steel roofing and siding are strongly advocated by fire insurance underwriters.

Lightning Protection. A dramatic incident took place in a southern state some time ago. A building roofed and sided with metal was struck thirty times during a protracted thunderstorm without sustaining sufficient damage to require repairs.

Vermin Protection. When you are specifying building materials

for rural construction, steel is your best choice. No rat, mouse, field mouse, chipmunk, or termite has ever yet succeeded in getting through a steel roofing or siding sheet.

Neat and Sanitary. Roofing and siding made of U.S.S Sheets have a smooth surface. The wind keeps buildings sheathed with steel clean with the aid of rain water, and carelessly thrown stones cannot break or crack steel sheets. U.S.S Galvanized Sheets are used for cisterns because of their smooth, clean surface.

Adaptability. The various forms of U.S.S Formed Roofing and Siding make it possible to construct practically any type of building, with roof construction from nearly flat to that of the steepest pitch.

Resistance to Weather. Sudden changes of weather or temperature are harmless to U.S.S Steel Roofing and Siding. If properly applied, steel sheets do not suffer from contraction or expansion and do not buckle or rattle. The highest grades of rust-resistant alloys and coatings found in U.S.S Sheets protect them for many years against the ravages of corrosion under atmospheric attack.

Low Upkeep Cost. Steel roofing and siding are the only building coverings which combine reasonable first cost with low upkeep cost over a long period. Painting at reasonable intervals is the only attention ever necessary with U.S.S Sheets. The saving in fire insurance rates alone often more than covers this very nominal expense.

Full Weight Sheets. The products of the Subsidiary Companies of the United States Steel Corporation are strictly standard, complying accurately to the fixed table of gauges on this page.

TABLE OF APPROXIMATE SAFE LOADS FOR CORRUGATED SHEETS — SUPPORTED AT ENDS ONLY

W

= Safe Load.

4

= 99900 D B T.

W

= $\frac{L}{D}$

D

= Depth of Corrugations in inches.

B

= Width of sheet in inches.

T

= Thickness of sheet in inches.

L

= Supported length of sheet in inches.

W

= Breaking weight distributed in pounds.

1 1/4" Corrugated sheet 26" wide	Gauge	16	18	20	22	24	26	27	28
	6'0" Span	211	169	127	106	85	64	58	53
	7'0" Span	181	145	109	91	73	55	50	45
	8'0" Span	158	127	95	79	64	47	44	40
	9'0" Span	141	113	85	70	56	42	39	35
	10'0" Span	127	101	76	64	51	38	34	32
1 1/2" Corrugated sheet 26" wide	6'0" Span	352	282	211	176	141	106	97	88
	7'0" Span	302	242	181	151	121	91	83	75
	8'0" Span	264	211	158	132	106	79	73	66
	9'0" Span	235	188	141	117	94	70	65	59
	10'0" Span	211	169	127	106	85	63	58	53

3/8-in. Depth used for 1 1/4-in. Corrugated Sheet.
5/8-in. depth used for 2 1/2-in. Corrugated Sheet.

UNITED STATES STANDARD GAUGE
FOR SHEET STEEL

Gauge No.	Weight per Sq. Ft.		Approx. Thickness Steel In.	Gauge No.	Weight per Sq. Ft.		Approx. Thickness Steel In.
	Ounces	Pounds			Ounces	Pounds	
3	160	10.000	0.2371	17	36	2.250	0.0538
4	150	9.375	0.2242	18	32	2.000	0.0478
5	140	8.750	0.2092	19	28	1.750	0.0418
6	130	8.125	0.1943	20	24	1.500	0.0359
7	120	7.500	0.1793	21	22	1.375	0.0329
8	110	6.875	0.1644	22	20	1.250	0.0299
9	100	6.250	0.1494	23	18	1.125	0.0269
10	90	5.625	0.1345	24	16	1.000	0.0239
11	80	5.000	0.1196	25	14	.8750	0.0209
12	70	4.375	0.1046	26	12	.7500	0.0179
13	60	3.750	0.0897	27	11	.6875	0.0164
14	50	3.125	0.0749	28	10	.6250	0.0149
15	45	2.812	0.0673	29	9	.5625	0.0135
16	40	2.500	0.0598	30	8	.5000	0.0120

(Below) This mine office is well protected with a durable roof of U.S.S Copper Steel Galvanized Sheets



Why Architects are Specifying U•S•S Copper Steel Galvanized Sheets for Air-Conditioning Work

Copper steel is an alloy made by adding small amounts of copper to molten steel, thereby increasing the resistance of steel to rust. Metallurgists, railroad construction engineers and independent chemists all say that, according to their tests, a fraction of 1% of copper added to molten steel doubles the life of the steel. The experts agree that their tests proved U•S•S Copper Steel to be an alloy which resists atmospheric corrosion longer than ordinary steel.

In specifying U•S•S Copper Steel Sheets for air-conditioning work, you are taking advantage of steel sheets which have 100% more life for about 5% more in cost, under ordinary atmospheric conditions.

Other advantages which U•S•S Black and Galvanized Sheets offer to the architect who specifies air-conditioning systems include the ease of fabrication and tight adherence of coating of these sheets.

Corrosion Resistance Year After Year in the Central Station

A modern skyscraper usually presents an attractive feature to summer visitors. Many large buildings are now completely air-conditioned. In the basements of these buildings are labyrinths of duct work. It is important that this duct work be constructed of steel sheets which are not only easy for the sheet metal worker to handle but are also made of the most durable materials. You can secure maximum speed of installation, long life and ultimate satisfaction for the owners of the building by specifying U•S•S Copper Steel Galvanized Sheets for your duct work.

For example: The Empire State Building, tallest building in the world, is efficiently air-conditioned. U•S•S Black Sheets and U•S•S Galvanized Sheets were used in the extensive ventilating systems of this building. Shreve, Lamb and Harmon were the architects.

The Chrysler Building, the Irving Trust Company Building and the New Waldorf-Astoria Hotel, New York City; The New Park Plaza Hotel, St. Louis, Missouri; The First National Bank Building, St. Paul, Minnesota, are other modern buildings where U•S•S Sheet Products were specified for air-conditioning of the finest type.

Not only are U•S•S Copper Steel Galvanized Sheets resistant to ordinary atmospheric conditions, but they have certain other special advantages when applied to air-conditioning. The presence of the small amount of copper in the steel base adds known resistance to

corrosion from water, industrial gases, and other liquids or vapors that may attack metal.

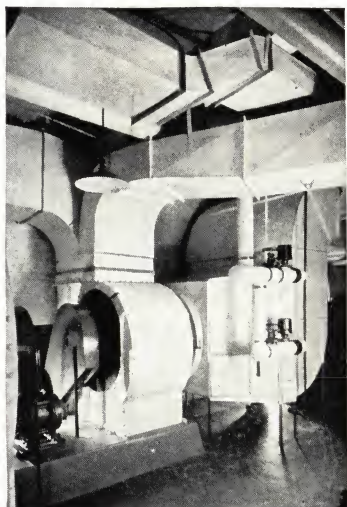
Below is shown a table of the gauges of sheets which are commonly used for ducts of varying diameters. For example, since a duct of large diameter requires a heavy gauge sheet, the table shows that duct work over 50 inches in diameter should be constructed of 18 gauge steel. This is a thickness of about .05".

GAUGES OF STEEL SHEETS USED FOR
DUCT CONSTRUCTION

HEATING AND VENTILATING				Planning Mill and Other Exhaust Systems	
Round Ducts		Rectangular Ducts			
Diam., Inches	Gauge	Width, Inches	Gauge	Diam., Inches	Gauge
6 to 19	26	4 to 18	26	Up to 8	21
20 to 29	24	19 to 30	24	9 to 14	22
30 to 39	22	31 to 60	22	15 to 20	20
40 to 49	20	61 to 118	20	21 to 30	18
50 and above	18	118 and above	18		

In the above table rectangular ducts are to have cross breaks for the gauges shown, otherwise two gauges heavier should be used. One inch standing seams should be used on widths up to 48", 1 1/2" seams on widths over 48", and for widths over 60", the seams should in addition be provided with reinforcing bars or angles.

(This material is reprinted from "Fan Engineering," Buffalo Forge Co.)



Duct work demands the extra corrosion resistance of U•S•S Copper Steel Sheets.

Galvanized sheets carrying the U•S•S symbol are uniform and workable.



There is the Traditional U.S.S. Quality Built into These Formed Products



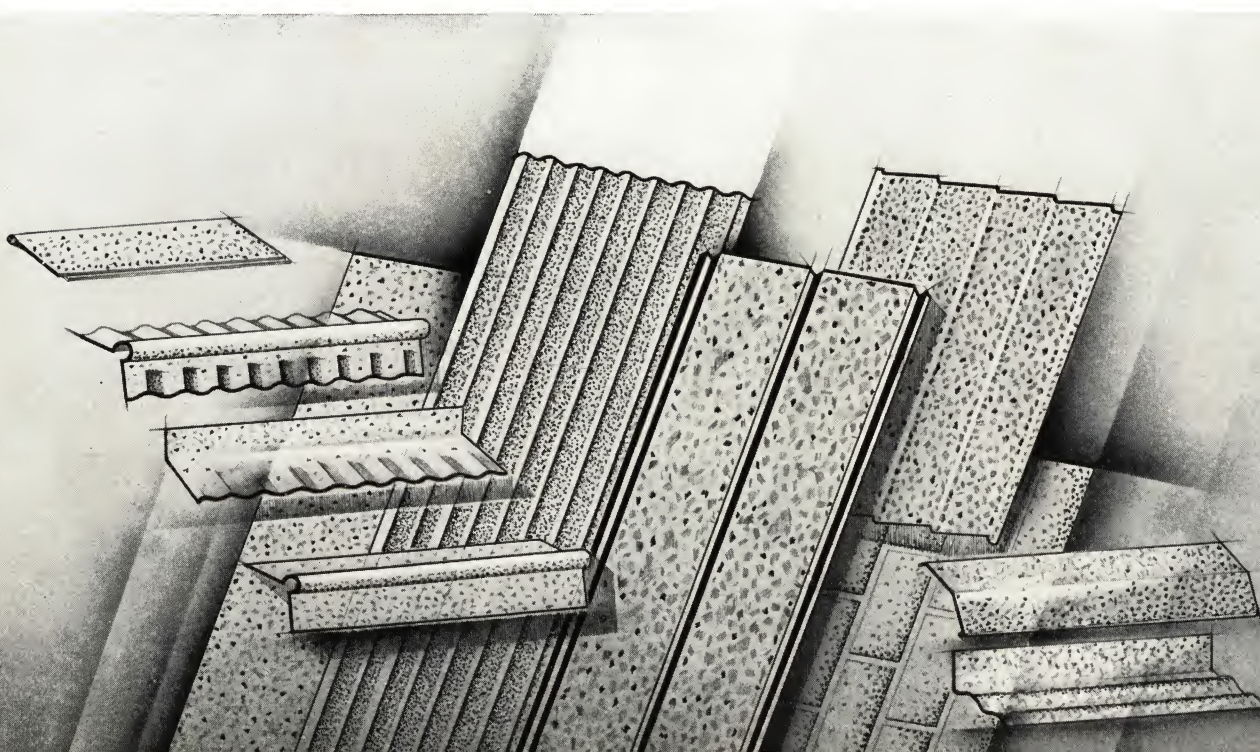
A vast number of U.S.S. Formed Roofing and Siding products are available for the architects who want to take advantage of the economy, speed of erection and long life of steel construction.

Shown below are types of V-crimp roofing and an example of U.S.S. Corrugated Galvanized Roofing. Corrugated sheets are obtainable in both flat and curved forms, and are thus applicable for side walls of various sizes and shapes. Curved corrugated sheets have been particularly adapted to arches, awnings, dormer and ventilator roofs and similar purposes; and also for culverts, cellars and underground use.

U.S.S. Syphon Seal Roofing is the name for two new types of non-syphoning, leakproof galvanized roofings. One is a 1 $\frac{1}{4}$ inch, corrugated, non-syphoning design; the other designs are 2 and 3 V-crimp non-syphoning roofings with a special cup-like channel designed to keep buildings dry in the worst kind of weather.

In addition, roll cap roofing, roll and cap roofing, and a number of fittings such as ridge roll, ridge angle, side wall and end wall flashing, and Gambrel joints are available in styles suited to the purse and the artistic sense of the builder.

Steel houses have come into much prominence recently, and some of the steel siding products such as the beaded ceiling or siding, the plain brick siding, the weatherboard siding, the rock face brick siding and the rock face stone siding will be interesting to architects who are keeping abreast of the latest developments of steel construction. For instance, by the use of the rock-face type of siding, a construction which looks very much like stone can be achieved with the advantages of light weight, strength, economy and ease of erection.



Two New U.S.S Roofings

1.

U·S·S TENNESEAL ROOFING—Inexpensive, leakproof, with four special features.

The Triple Cross Crimp on U·S·S Tenseal Roofing Sheets keeps rain from being blown or drawn under end laps by capillary attraction. Rain cannot pass these three strong dams.

The Pressure Lip is another feature, consisting of a slight depression in the lower end of the sheet, insuring a pressure contact between overlapping sheets at the end laps. It prevents leaks when the sheet is nailed in place on the roof decking.

The V-Drain is a new design of drain which prevents leaks at the side laps. If rain is blown or drawn under the lap by capillary attraction, it is caught in the V-Drain and flows quickly off the roof at the eaves.

2.

The Tension Curve is another important feature of U·S·S Tenseal Roofing. After nailing, each sheet fits snugly and closely to the roof decking.

U·S·S STORMSEAL ROOFING—Self-draining, positively stops leaks under severe conditions.

U·S·S Storm Seal Roofing is another design which may appeal to the property owner. Instead of the two V-crimps at each side of the sheet, there is a single fitting into which a nail may easily be driven. The flat top of the V makes this nailing easy.

In addition to the features of the Triple Cross Crimp, the Pressure Lip and the Tension Curve, which are included in U·S·S Tenseal Roofing, U·S·S StormSeal has a Twin-Drain feature. Notice the two channels at either side of the central V. These channels act as gutters and serve as drains for any water which may syphon in by capillary attraction.

How to Lay These New Roofings

In applying U·S·S Tenseal Galvanized Sheet Steel Roofing and U·S·S Storm-Seal Galvanized Sheet Steel Roofing, the sheets are not laid in rows from left to right or right to left across the roof. Instead, they should be laid in rows from eave to ridge. The first sheet should be applied at the lower left gable end, with the Triple Cross Crimp at the bottom. Then lay the second sheet above the first. The third sheet is then laid above the second, etc., until the first vertical row is finished. After the first row from eave to ridge is completed, each additional row is applied in the same way. An end lap of 6" is ample.

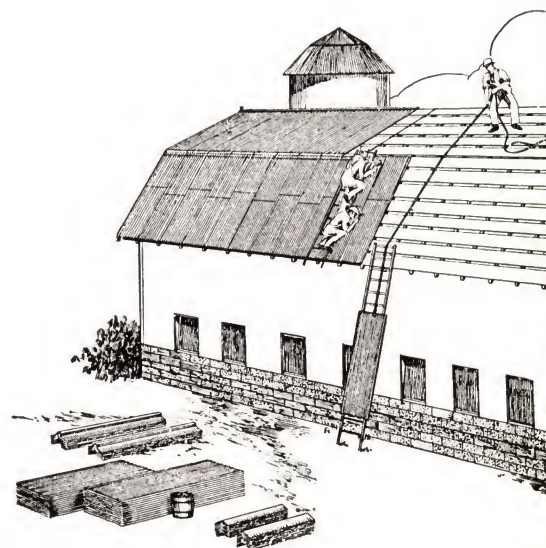
3.

4.

5.

CAPTIONS TO DRAWINGS

1. The Triple Cross Crimp
2. The Pressure Lip
3. The V-Drain (U·S·S Tenseal)
4. The Tension Curve
5. A Neat, Leakproof Lap—U·S·S Stormseal





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